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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,560

12/12/2003

Nara Won

TI-35878

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23494

7590

01/10/2007

TEXAS INSTRUMENTS INCORPORATED

P O BOX 655474, M/S 3999

DALLAS, TX 75265

EXAMINER

LEE, JOHN J

ART UNIT

PAPER NUMBER

2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/735,560

Applicant(s)

WON, NARA

Examiner

JOHN J. LEE

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8-10,12-15 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,5-7,11,16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8-10,12-15 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Species II of Fig. 2 and claims 1, 3, 4, 8-10, 12-16 and 18-20 in the reply filed on 10/10/2006 is acknowledged.
2. Claim 16 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species III of Fig. 3 (i.e., noted that "a transmitting unit" located in the second integrated circuit and "receiving unit" located in the first integrated circuit as recited in claim 16 is described in Species III of Fig. 3), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/10/2006.

### *Claim Objections*

3. Claim 12 is objected to because of the following informalities: In claim 12, line 4, the phrase "consisting or" should be changed to - consisting of --. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. **Claims 15, 18, 19 and 20** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 15, it is unclear how "signal groups" recited in line 16 is related to "signal groups" recited in line 7? If there are the same "signal groups", please change "signal groups" recited in line 16 to -- said signal groups --.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1, 3, 9, 10, 12-14, 15 and 19** are rejected under 35 U.S.C. 102(e) as being anticipated by Kunz et al. (U.S. 2005/0003781 A1).

Regarding **claim 1**, Kunz '781 discloses an integrated circuit chip (i.e., as shown in Figs. 5-7, the transmitter and receiver circuits are integrated into the chip; see paragraphs 0005+ and 0042+), the chip comprising:

a plurality of components for processing signal groups (i.e., noted the signal processing circuits as shown in Figs. 1-4; and also noted the use of plurality of

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components for processing signal groups as shown in the transmitter chips and the receiver chip of Figs. 5-7); and

a group of components for receiving signal groups (i.e., noted the elements 102, 104, 106, 108, 112 and 110 as shown in Fig. 1 for receiving signal groups, such as the packets transmitted from the transmitter as shown in Figs. 5-7), the group of components including; an antenna for receiving radio frequency signals (i.e., noted the use of an antenna for receiving RF signals as discussed in paragraphs 0020); a radio frequency receiver coupled to the antenna (i.e., noted the receiver as shown in Figs. 1 and 5-7; see paragraph 0020), the receiver detecting the radio frequency signals (i.e., see Figs. 1-7; paragraphs 0015+); and a demodulator coupled to the receiver, the demodulator recovering signal groups in the radio frequency signals, the signal groups being applied to the plurality of components (i.e., as shown in Figs. 1-4, the demodulator 106/108 is coupled to the receiver for recovering signals groups, such as the packets of RF signal group transmitted from the transmitter, and the signals groups of FSK/FM & ASK/AM is further applied to the microcontroller, ADC and respective output devices as shown in Figs. 1-40; see paragraphs 0020-0025).

Regarding **claim 3**, Kunz '781 discloses wherein signals received by the radio frequency receiver are modulated with a modulation from the group consisting of amplitude modulation and frequency modulation (i.e., noted the FSK/FM and ASK/AM as discussed in paragraph 0040; and see Fig. 7).

Regarding **claim 9**, Kunz '781 discloses a method for transferring logic signal groups between integrated circuit chips (i.e., see Figs. 1-7; paragraphs 0042+), the method comprising:

modulating and transmitting a radio frequency signal by a first integrated circuit with logic signal groups generated by the first integrated circuit (i.e., as shown in Figs. 5-7, the RF signals is modulated/encoded from the first integrated transmitter circuit 502/504); and receiving and demodulating the radio frequency signal by the second integrated circuit (i.e., noted that the received RF signal is demodulated at the receiving circuit 506 as shown in Figs. 5-7; and also see Fig. 1-4 for demodulation process of the receiving circuit).

Regarding **claim 10**, Kunz '781 discloses wherein the radio frequency signal transmits signal groups formatted in a serial format (i.e., as discussed in paragraphs 0021, the RF signal is modulated in a wide variety of modulation/encoding formats for a transmission, such as AM/FM modulated/encoded signals. Thus, the packet block transmitted from the transmitter as shown in Figs. 5-7 must be in either serial or parallel data format. In view of this, the use of "a serial format" for transmitting RF signal is an inherent feature of Kunz '781. In particular, it's cleared from Fig. 1 that single serial formatted modulated signal packet block is received at the down-converter 102 and further converted to output a parallel format to the FSK/FM and ASK/AM demodulators 106 and 108 respectively).

Regarding **claim 12**, Kunz '781 discloses wherein the modulation of the carrier frequency transmitting the signal groups is modulation with a modulation selected from

the group consisting of amplitude modulation and frequency modulation (see Fig. 1 and paragraphs 0040).

Regarding **claim 15**, Kunz '781 discloses a system for transferring data signal groups between integrated circuit chips (i.e., noted the integrated circuit chips for the transmitter and the receiver as shown in Figs. 5-7; also see paragraphs 0042+): the system comprising:

a first integrated circuit chip (i.e., see Figs. 5-7, the elements 502-504, 602-604 and 702-704), the first integrated circuit chip including: a first processing unit (i.e., noted the DATA Source and DATA Encoder); and a radio transmitting unit (i.e., noted the RF Transmitter as shown in Figs. 5-7) coupled to the first processing unit and receiving signal groups there from (i.e., noted the Transmitter as shown Figs. 5-7 is coupled to the Data Source/Encoder, and receiving the signal packet groups from the Data Source/Encoder), the radio transmitting unit transmitting the signal groups from the first processing unit (i.e., as shown in Figs. 5-7, the transmitter unit 502 and 504 transmitted the signal groups from the processing unit such as DATA Source/Encoder); and

a second integrated circuit (i.e., as shown in Figs. 5-7, the receiving circuit 506, 606 and 706 is considered as a second integrated circuit as claimed; see paragraphs 0005+ and 0042+), the second integrated circuit including: a second processing unit (i.e., as shown in Figs. 1-7, the elements 102, 104, 106, 112, 110 and 508 are considered as a second processing unit), and a radio receiving unit (i.e., noted the RF receiver 102/508 as shown in Figs. 1-7) coupled to the second processing unit (i.e., the elements 104, the data

decoder and MCU as shown in Figs. 1-7 are considered as a second processing unit), the radio receiving unit receiving radio signal from the transmitting unit (i.e., noted that the RF receiver as shown in Figs. 1-7 is receiving RF signal from the transmitter), the transmitting unit applying signal groups to the second processing unit (i.e., as shown in Figs. 1-7, the encoded RF signal packets from the transmitting unit are applied to the decoding/demodulating circuits at the receiver device).

Regarding **claim 19**, Kunz '781 discloses wherein the first integrated circuit is located on a first circuit board, and the second integrated circuit is located on a second circuit board (i.e., as shown in Figs. 5-7, the first integrated circuit for the transmitter is located on the first circuit board of the transmitter 502, 602 and 702, and the second integrated circuit of the receiver is located on the second receiver circuit 506, 606 and 706).

Regarding **claim 13**, Kunz '781 discloses wherein a transmitted signal is encoded with a signal identifying pre-selected pattern of signals (i.e., as shown in Figs. 5-7, the Data encoder from the transmitter circuit used a wide variety of modulation/encoding schemes; thus, the packet data transmitted from the transmitter is considered as "pre-selected pattern of the signals", and also noted the identifying of the pre-selected packet pattern of the RF signals as discussed in paragraphs 0026-0038).

Regarding **claim 14**, Kunz '781 discloses wherein the receiving and demodulating provide a decoded signal representing a pre-selected pattern of signals (i.e., as shown in Figs. 1-7, the receiver is receiving and demodulating a pre-selected pattern of signals



either in FSK/FM or ASK/AM format at the receiving circuit as encoded from the transmission side).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 4, 8 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunz '781 in view of Shimizu et al. (U.S. 4,989,204).

Regarding **claim 4**, it is noted that Kunz '781 does not explicitly show the use of an analyzer, the analyzer receiving signals from the demodulator; the analyzer decodes the signal from the demodulator into a plurality of logic signals.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Shimizu '204. In particular, Shimizu '204 teaches the use of an analyzer (i.e., see Fig. 4, the element 49/50), the analyzer receiving signals from the demodulator; and the analyzer (i.e., the elements 48 and 49/50) decodes the signal from the demodulator into a plurality of logic signals (i.e., as discussed in col. 5, lines 54+ that the analyzer 49/50 receiving packet signals from the demodulator 47/48, and the analyzer 49/50 and the decoder 48 is used to decodes the signal from the demodulator 47 into a plurality of packet signals and directed to the channel controller 41 and the user's I/O device 40 as a logic signals).

In view of the above, having the system of Kunz '781 and then given the well-established teaching of Shimizu '204, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kunz '781 as taught by Shimizu '204, since Shimizu '204 stated in col. 1, lines 50+ that such a modification would ensure high throughput communication in a packet radio communication system.

Regarding **claim 8**, it's noted that although Kunz '781 discloses the use of a packet signal group, Kunz '781 does not explicitly show a header portion, a data portion, and a tail portion.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Shimizu '204. In particular, Shimizu '204 teaches the use of a packet signal groups having a header portion (i.e., see Fig. 5a, the element's 62 and 63, the "SYNC" portion of the packet), a data portion (i.e., see Fig. 5a, the elements 62 and 63, the "DATA" portion) and a tail portion (i.e., noted the "FCS" portion of the packet 62 and 63 as shown in Fig. 5a) in the RF communication system is conventionally known to the one having ordinary skilled in the art at the time of the invention was made.

In view of the above, having the system of Kunz '781 and then given the well-established teaching of Shimizu '204, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kunz '781 as taught by Shimizu '204, since Shimizu '204 stated in col. 1, lines 50+ that such a

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modification would ensure high throughput communication in a packet radio communication system.

Regarding **claim 20**, it is noted that claim 20 corresponding to the claim 8 as discussed above, thus, please see the Examiner's comments with respect to claim 8 as set forth above.

10. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunz '781 in view of Kang (U.S. 5,058,150).

Regarding **claim 18**, it is noted that although Kunz '781 discloses RF systems for processing serial transmitted information (i.e., noted that Packetized RF bursts transmitted from the transmitter are considered serial transmitted information; see paragraphs 0051+), Kunz '781 does not explicitly show the use of a synthesizer in the transmitting unit and an analyzer in the receiving unit as recited in present claimed invention.

However, using the analyzer in the receiving unit and the synthesizer in the transmitting unit is conventionally known in the art as evidenced by Kang '150 (i.e., as shown Figs. 1 and 2, the receiving unit 202 is coupled to the analyzer 221 and the transmitting unit is coupled to the synthesizing unit 223).

In view of the above, having the system of Kunz '781 and then given the well-established teaching of Kang '150, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kunz '781

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as taught by Kang '150. Since Kang '150 stated in col. 17, lines 25+ that such a modification would improve the reliability of the automatic answering device.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muschallik et al. (US 2004/0087279) discloses Transmitting and Receiving Unit.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231  
Or P.O. Box 1450  
Alexandria VA 22313

or faxed (571) 273-8300, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

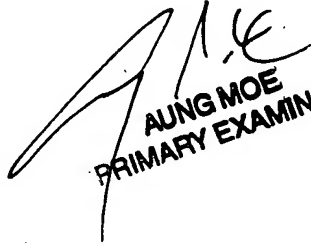
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor,

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**Edward Urban**, can be reached on (571) 272-7899. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L  
January 5, 2007

John J Lee

  
AUNG MOE  
PRIMARY EXAMINER